What is claimed is:

1.A composite carrier of catalysts for propylene polymerization, comprising magnesium halide and silica material with an average particle size of less than 10 microns.

2.The composite carrier according to claim 1, wherein the silica material has an average particle size of less than 5 microns.

3. The composite carrier according to claim 1, wherein the silica material has an average particle size of less than 1 microns.

4. A composite carrier of catalysts for propylene polymerization, which is spheric particles obtainable by contacting magnesium halide with one or more electron donor compounds to form a solution, then mixing the solution with silica material with an average particle size of less than 10 microns to form a mixture, and drying the mixture through spray drying process.

5.The composite carrier according to claim 4, wherein the silica material has an average particle size of less than 5 microns.

6. The composite carrier according to claim 5, wherein the silica material has an average particle size of less than 1 microns.

7. The composite carrier according to claim 4, wherein the spheric particles have an average particle size of from 5 to 60 microns.

8. The composite carrier according to claim 7, wherein the spheric particles have an average particle size of from 10 to 40 microns.

9. The composite carrier according to claim 4, wherein the electron donor compound used during the preparation of the composite carrier is selected from the group consisting of optionally halogenated aliphatic or aromatic alcohols, aliphatic ethers, cyclic ethers, optionally halogenated aliphatic alkylene oxides, aliphatic ketones, alkyl esters of aliphatic or aromatic carboxylic acids, hydrocarbyl or halohydrocarbyl esters of phosphoric acid or phosphorous acid, and mixture thereof.

10. The composite carrier according to claim 9, wherein the electron donor

compound is a system comprising at least one of optionally halogenated C_{1-8} aliphatic alcohols and optionally halogenated C_{7-10} aromatic alcohols.

11.The composite carrier according to claim 10, wherein the electron donor compound is at least one of optionally halogenated C_{1-8} aliphatic alcohols and optionally halogenated C_{7-10} aromatic alcohols, or a mixture of said alcohol with a C_{1-6} aliphatic ether, a C_{3-5} cyclic ether, or a C_{1-6} alkyl ester of aliphatic or aromatic carboxylic acid.

12. The composite carrier according to claim 4, wherein molar ratio of the electron donor compound used during the preparation of the composite carrier to magnesium halide is in a range of from 3:1 to 50:1.

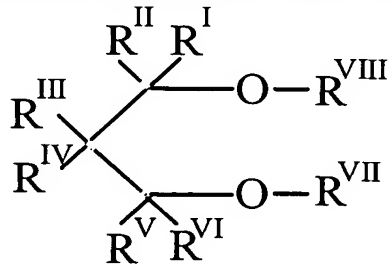
13. A composite carrier of catalysts for propylene polymerization, which is spheric particles obtainable by contacting magnesium chloride with an electron donor system consisting of an aliphatic alcohol and optionally an aliphatic ether, a cyclic ether, or an alkyl ester of aliphatic or aromatic carboxylic acid to form a solution, then mixing the solution with silica material having an average particle size of less than 1 micron to form a mixture, and drying the mixture through spray drying process.

14. The composite carrier according to claim 13, wherein molar ratio of the aliphatic alcohol to magnesium chloride is in a range of from 3:1 to 50:1, and molar ratio of the aliphatic ether, cyclic ether, or alkyl ester of aliphatic or aromatic carboxylic acid to magnesium chloride is in a range of from 0:1 to 20:1.

15.A catalyst component for propylene polymerization, comprising reaction product of the composite carrier according to claim 4 and a titanium compound represented by formula $Ti(OR^2)_{4-m}X_m$, in which R^2 groups are identical or different, and are C_{1-14} aliphatic hydrocarbyl, X are selected from the group consisting of F, Cl, Br and mixture thereof, m is an integer of from 1 to 4, wherein prior to, during, or after the reaction between the composite carrier and the titanium compound, the composite carrier is treated using an internal electron donor compound.

16. The catalyst component for propylene polymerization according to claim

15, wherein the internal electron donor compound is selected from the group consisting of esters of aliphatic polycarboxylic acid, esters of aromatic carboxylic acid, and 1,3-diether compounds having a general formula (I)



(I)

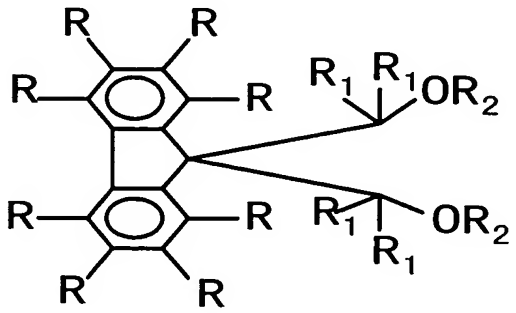
in which R^I, R^{II}, R^{III}, R^{IV}, R^V and R^{VI} are identical or different, and are selected from the group consisting of hydrogen, halogen, optionally halogenated linear or branched C_1-C_{20} alkyl, optionally halogenated C_3-C_{20} cycloalkyl, optionally halogenated C_6-C_{20} aryl, optionally halogenated C_7-C_{20} alkaryl and optionally halogenated C_7-C_{20} aralkyl, R^{VII} and R^{VIII} are identical or different, and are selected from the group consisting of optionally halogenated linear or branched C_1-C_{20} alkyl, optionally halogenated C_3-C_{20} cycloalkyl, optionally halogenated C_6-C_{20} aryl, optionally halogenated C_7-C_{20} alkaryl and optionally halogenated C_7-C_{20} aralkyl, and R^I - R^{VI} groups can be bonded each other to form a ring, and mixture thereof.

17. The catalyst component for propylene polymerization according to claim 16, wherein the internal electron donor compound is one or more selected from the group consisting of phthalates, malonates, succinates, glutarates, pivalates, and carbonates.

18. The catalyst component for propylene polymerization according to claim 16, wherein in the 1,3-diether compounds having a general formula (I), R^{III} and R^{IV} are bonded each other to form an unsaturated fused ring structure, and hydrogen atoms on said fused ring structure are optionally substituted by one or more groups selected from the group consisting of halogen, optionally halogenated linear or branched C_1-C_{20} alkyl, optionally halogenated C_3-C_{20} cycloalkyl, optionally halogenated C_6-C_{20} aryl, optionally halogenated C_7-C_{20} alkaryl and optionally

halogenated C_7-C_{20} aralkyl.

19. The catalyst component for propylene polymerization according to claim 16, wherein the 1,3-diether compounds are compounds represented by a general formula (III)



(III)

in which R are identical or different, and are selected from the group consisting of hydrogen, halogen, optionally halogenated linear or branched C_1-C_{20} alkyl, optionally halogenated C_3-C_{20} cycloalkyl, optionally halogenated C_6-C_{20} aryl, optionally halogenated C_7-C_{20} alkaryl and optionally halogenated C_7-C_{20} aralkyl;

R_1 are identical or different, and are selected from the group consisting of hydrogen, halogen, optionally halogenated linear or branched C_1-C_{20} alkyl, optionally halogenated C_3-C_{20} cycloalkyl, optionally halogenated C_6-C_{20} aryl, optionally halogenated C_7-C_{20} alkaryl and optionally halogenated C_7-C_{20} aralkyl;

R_2 are identical or different, and are selected from the group consisting of optionally halogenated linear or branched C_1-C_{20} alkyl, optionally halogenated C_3-C_{20} cycloalkyl, optionally halogenated C_6-C_{20} aryl, optionally halogenated C_7-C_{20} alkaryl and optionally halogenated C_7-C_{20} aralkyl.

20. A catalyst component for propylene polymerization, which is obtainable through a process comprising the steps of:

(i) preparing spheric composite carrier by contacting magnesium halide with one or more electron donor compounds to form a solution, then mixing the solution with silica material having an average particle size of less than 10 microns to form a mixture, and drying the mixture through spray drying process;

(ii) reacting the composite carrier prepared in step (i) with a titanium compound represented by formula $Ti(OR^2)_{4-m}X_m$, in which R^2 groups are identical or different, and are C_{1-14} aliphatic hydrocarbyl, X are selected from the group consisting of F, Cl, Br and mixture thereof, m is an integer of from 1 to 4, and

(iii) prior to, during, or after the reaction between the composite carrier and the titanium compound, treating the composite carrier with an internal electron donor compound selected from the group consisting of esters of aliphatic polycarboxylic acid, esters of aromatic carboxylic acid, and 1,3-diether compounds having a general formula (I) as defined in claim 16, and mixture thereof.

21. A catalyst component for propylene polymerization, which is obtainable through a process comprising the steps of:

(i)preparing spheric composite carrier by contacting magnesium chloride with an electron donor system consisting of an aliphatic alcohol and optionally an aliphatic ether, a cyclic ether or an alkyl ester of aliphatic or aromatic carboxylic acid to form a solution, then mixing the solution with silica material having an average particle size of less than 1 micron to form a mixture, and drying the mixture through spray drying process;

(ii)reacting the composite carrier prepared in step (i) with a titanium compound represented by formula $Ti(OR^2)_{4-m}X_m$, in which R^2 groups are identical or different, and are C_{1-14} aliphatic hydrocarbyl, X are selected from the group consisting of F, Cl, Br and mixture thereof, and m is an integer of from 1 to 4, and

(iii) prior to, during, or after the reaction between the composite carrier and the titanium compound, treating the composite carrier with an internal electron donor compound selected from the group consisting of esters of aliphatic polycarboxylic acid, esters of aromatic carboxylic acid, and 1,3-diether compounds having a general formula (I) as defined in claim 16, and mixture thereof.

22. A catalyst for propylene polymerization, comprising reaction product of:

(i)the catalyst component according to claim 15;

(ii) an alkyl aluminium compound; and

(iii) optionally, an external electron donor component.

23. The catalyst for propylene polymerization according to claim 22, wherein the alkyl aluminium compound is represented by formula $AlR^3_nX_{3-n}$, in which R^3 are identical or different, and are linear, branched, or cyclic alkyl having 1 to 20 carbon atoms, X is halogen, n=1, 2 or 3.

24. The catalyst for propylene polymerization according to claim 23, wherein the external electron donor component is an organosilicone compound represented by formula $R^4_nSi(OR^5)_{4-n}$ in which n is in a range of from 0 to 3 inclusive, R^4 and R^5 are identical or different, and are alkyl, cycloalkyl, aryl, haloalkyl, R^4 can also be halogen or hydrogen atom.

25. The catalyst for propylene polymerization according to claim 24, wherein ratio of solid catalyst component (i) to alkyl aluminium compound component (ii) to external electron donor component (iii) is in a range of 1:5 to 1000:0 to 500, calculated on molar basis of titanium, aluminium and silicone.